

EROSION AND WEAR RESISTANT PROTECTIVE STRUCTURES  
FOR TURBINE ENGINE COMPONENTS

ABSTRACT

[0052] An erosion resistant protective structure for a turbine engine component comprises a shape memory alloy. The shape memory alloy includes nickel-titanium based alloys, indium-titanium based alloys, nickel-aluminum based alloys, nickel-gallium based alloys, copper based alloys, gold-cadmium based alloys, iron -platinum based alloys, iron-palladium based alloys, silver-cadmium based alloys, indium-cadmium based alloys, manganese-copper based alloys, ruthenium-niobium based alloys, ruthenium-tantalum based alloys, titanium based alloys, iron-based alloys, or combinations comprising at least one of the foregoing alloys. Also, disclosed herein are methods for forming the shape memory alloy onto turbine component.